

## **REMARKS**

The Office Action mailed on May 21, 2003, has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 1-21 were pending in the present application. By this paper, Applicants add claim 22. Therefore, claims 1-22 are now pending in the present application.

Applicants respectfully submit that the present application is in condition for allowance for the reasons that follow.

### **Reference Characters**

Reference characters have been retained in the claims but have no effect on the claim scope per MPEP § 608.01(m)

### **Rejections Under 35 U.S.C. §112, Second Paragraph**

In the Office Action, claims 1-3, 10 and 12-21 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, the Office Action alleges that it is unclear what is meant by “remains substantially intact” in claim 1, in that “one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.”

Applicants respectfully submit that one of ordinary skill in the art would recognize the scope of the invention when reading claim 1, especially in view of the portion of the claim that modifies the alleged indefinite language. Claim 1 recites that the “longitudinal cavity being adapted to remain substantially intact when the male connector (1) is bent, thereby protecting the conductors (5), which are disposed in said cavity, from being damaged.”

Applicants submit that a person of ordinary skill in the art would be able to determine whether a male connector infringed claim 1 by simply looking at a cross-section of a bent male connector. That is, he would be able to determine from the cross-section whether or not the cavity remains substantially intact. Still further, one of ordinary skill in the art would likewise be able to determine or at least identify the possibility of damage to the connector.

Additionally, Applicants point to the specification of the present application, which states that the

cavity, in which the conductors 5 are disposed, will remain *practically intact* even when the male connector is bent. *This means* that even if a bending stress is imposed on the male connector, there is no risk that the conductors 5 will be squeezed between the core wire 3 and the conductive member 4, which obviously prevents the conductors 5 from being damaged during, for example, insertion into a female connector.

(Specification, page 7, lines 23-25, emphasis added.) Thus, Applicants respectfully submit that by defining the meaning of “practically intact,” one of ordinary skill in the art would understand, based on the specification and knowledge generally available to one of ordinary skill in the art, what is claimed by “remains substantially intact.” Applicants respectfully request reconsideration of the rejections.

### **Rejections Under 35 U.S.C. § 102**

Claims 1, 10, 12 and 17-21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Akerfeldt (USP 5,938,624). In response, Applicants respectfully submit that the above claims are allowable for the reasons that follow.

Applicants rely on MPEP § 2131, entitled “Anticipation – Application of 35 U.S.C. 102(a), (b), and (e),” which states that a “claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” It is respectfully submitted that Akerfeldt does not describe each and every element of claim 1, and thus claims 2-21 as well due to their dependency from claim 1.

→ Claim 1 recites a male connector (1) including a core wire (3) having “such a shape that at least one longitudinal cavity is provided inside the male connector (1), the longitudinal cavity being adapted to remain substantially intact when the male connector (1) is bent.” That is, the core wire (3) has a *shape* that forms a cavity with respect to the rest of the connector.

In an exemplary embodiment shown in Fig. 5, the core wire (3) is in the shape of a “D,” thus providing a cavity between the inner surface of a cylindrical conductive member (4) and the

flat part of the D-shaped core wire. In another exemplary embodiment shown in Figs. 6 and 7, the core wire has hogouts forming cavities for the reception of conductors (5).

In contrast, the Akerfeldt reference does not disclose a core wire having the claimed shape. True, Akerfeldt does teach a core wire, but even assuming *arguendo* that Akerfeldt teaches a cavity proximate to the core wire, the cavity is not formed as a result of the shape of the core wire. In Akerfeldt, as can be clearly seen in Figs. 13 and 14, the core wire 1 is merely a circular wire, and does not provide a cavity in a connector due to the shape of the core wire.

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Claim 1 further recites that “the longitudinal cavity [is] adapted to remain substantially intact when the male connector (1) is bent.” This results in a connector that can withstand a bending stress imposed on the connector, thus providing a connector where there is little to no risk that the conductors (5) will be squeezed between the core wire (3) and the conductive member (4), and therefore lessening the chance that conductors (5) could be damaged during, for example, insertion into a female connector.

The Akerfeldt reference does not teach this and in fact teaches away from such a feature. Assuming *arguendo* that Akerfeldt teaches a longitudinal cavity, any cavity of Akerfeldt would appear to one of ordinary skill in the art to not remain substantially intact when the connector of Akerfeldt is bent.

The Office Action states that the “cavity disclosed by Akerfeldt et al. would remain substantially intact when the male connector is bent in that the insulating material located in the recess would provide internal reinforcement.” (Office Action, page 3, lines 10-12.) Applicants respectfully submit that this is not the case. First, there is no disclosure or even a suggestion in Akerfeldt that its insulating material provides such reinforcement. Thus Office Action appears to be utilizing an inherency argument to satisfy the recitation of a longitudinal cavity remaining substantially intact when the connector is bent. Such an argument does not comport with the guidelines established in the MPEP, as will now be discussed.

Applicants respectfully rely on MPEP § 2112, which states that while “a rejection under 35 U.S.C. §102/103 can be made when the prior art product seems to be identical except that the

prior art is silent to an inherent characteristic,” the “[E]xaminer *must* provide rationale or evidence tending to show inherency.” (MPEP § 2112, subsections 3 and 4, emphasis added.) It is respectfully submitted that no evidence tending to show inherency has been provided in the present Office Action. In arriving at this conclusion, Applicants rely on the following excerpt from MPEP § 2112:

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijkaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). “To establish inherency, the extrinsic evidence ‘must make clear that *the missing descriptive matter is necessarily present* in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted)

(Emphasis added.) Inherency means that *the missing descriptive matter is necessarily present* in the reference. Recognizing the power of the inherency argument, the courts have tempered its use, as is seen in § 2112, where the PTO has stipulated that the examiner corps must follow certain procedures before invoking inherency: the “examiner must provide rationale or evidence tending to show inherency.” In the present case, no such rationale or evidence has been provided in the Office Action. The statement that “the insulating material located in the recess would provide internal reinforcement” does not satisfy the PTO’s burden to provide rationale or evidence showing that “the missing descriptive matter is necessarily present.” Just because it may be desirable to have insulation imparting such properties does not mean that such properties are always present. Just the opposite is true: it is entirely possible that the insulation of Akerfeldt does not provide sufficient internal reinforcement so that the alleged cavity remains substantially intact during bending. The subject matter of claim 1 is simply not *necessarily present* in the references. It is entirely probable that the insulation of Akerfeldt will not provide internal reinforcement so that the cavity remains substantially intact. Thus, the subject matter of

Applicants' claims is not expressly or inherently disclosed in Akerfeldt. Therefore, a reference that explicitly teaches these recitations must be found, else the claims must be allowed.

Still, assuming *arguendo* that it does provide reinforcement, one of ordinary skill in the art would immediately recognize that the alleged cavity of Akerfeldt would be deformed when the connector is bent, and that when the cavity is deformed, the conductors would ultimately be squeezed between the core wire and the conductive members. Thus, the Akerfeldt reference cannot satisfy the third objective of the present invention: "to provide a male connector having a core wire with such a shape that conductors are protected from damage even if the male connector is bent." (Specification, page 3, lines 16-18.)

In sum, claim 1 is allowable for at least the reasons above. Reconsideration of claim 1 and the claims that depend from claim 1 is respectfully requested.

#### **Claim Rejections Under 35 U.S.C. §103(a)**

In the Office Action, claims 2-3, 10, and 12-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Akerfeldt variously in view of Abrahamson, Koelle, and Wallace.

Applicants respectfully submit that these claims are allowable for at least the reason that Akerfeldt does not teach each and every recitation of claim 1, as indicated above, and that Abrahamson, Kollé, and Wallace do not remedy the deficiencies of Akerfeldt.

Still further, in regard to claim 2, rejected as being obvious over Akerfeldt in view of Abrahamson, Applicants respectfully submit that Abrahamson does not teach or suggest a "core wire (3) [having] a D-shaped cross section." The "D" shaped portion of Abrahamson is merely a hole in a catheter 14. That is, the "D" shaped portion of Abrahamson is not a core wire according to the present invention. In fact, Abrahamson teaches away from a "D" shaped core wire, as a wire 16 and a wire guide 35 are disposed in the "D" shaped hole. Applicants further note that the wire 16 and the wire guide 35 are circular, as can be seen in Fig. 7, and thus are not "D" shaped wires.

In regard to the rejection of claim 3, Applicants respectfully submit that neither Akerfeldt nor Abrahamson, alone or in combination, teach or suggest “a minimum of insulating material (6) being provide between the curved part of the D-shaped core wire (3) and the inner surface of the conductive members (4).” First, as noted above, there is no D-shaped core wire (3) in Abrahamson. Further, assuming *arguendo* that the “D” shaped cavity of Abrahamson satisfies the recited core wire, there is no teaching of insulation between the alleged core wire of Abrahamson and an inner surface of a conductive member as claimed. Indeed, Abrahamson does not teach conductive members “spaced apart longitudinally along [a] core wire.” Thus, the recitations of claim 3 are not present in the cited references, and claim 3 is allowable for at least this additional reason.

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Applicants respectfully submit that there is no motivation to combine Abrahamson and Akerfeldt that satisfies the requirements of MPEP § 2143.01. Abrahamson is directed towards a completely different field of endeavor, that of catheter stiffeners, and thus one of ordinary skill in the art would not have been motivated to look to Abrahamson to arrive at the present invention.

MPEP § 2143.01, subsection 6 states that “the proposed modification cannot change the principle of operation of a reference – If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810 (CCPA 1959).” In *Ratti*, the CCPA held that the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in the primary reference.” This substantial redesign would have resulted in changing a rigid seal to a resilient seal. In the same manner, substituting the relatively rigid core wire of Akerfeldt with the flexible “D” shaped cavity of Abrahamson would require a substantial reconstruction and redesign of Akerfeldt (assuming *arguendo* that the “D” shaped cavity of Abrahamson satisfies the recitation of a core wire).

In sum, claims 2 and 3 are allowable for at least the additional reason that one of ordinary skill in the art would not be motivated to combine the cited references.

**Withdrawn Claims**

Claims 4-9 and 11 were withdrawn in a prior Office Action. Applicants note that these claims depend from claim 1. Applicants respectfully request that the PTO rejoin and reconsider claims 4-9 and 11 due to their dependency from claim 1, a claim that is allowable.

**New Claim**

Applicants have added new claim 22. Support for the new claim is found, among other places, at claim 15. Applicants respectfully submit that this claim is allowable for at least the reason that claim 1 is allowable, and that the “D” shaped portion of Abrahamson is not made from titanium, and that Abrahamson teaches away from such material, in that, as noted above, it teaches that the material of catheter 14 is silicone or another soft material (See Abrahamson, col. 2, lines 43-44.)

**Conclusion**

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Examiner Foreman is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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FOLEY & LARDNER  
Customer Number: 22428



22428

PATENT TRADEMARK OFFICE

Telephone: (202) 295-4747  
Facsimile: (202) 672-5399

By 

Martin J. Cosenza  
Attorney for Applicant  
Registration No. 48,892